



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,872	12/26/2001	Dennis Boyd	26422/20650	7442

7590 02/25/2003

Grant D. Kang, Thompson Coburn LLP  
c/o Gregory E. Upchurch  
Suite 3500  
One Firststar Plaza  
St. Louis, MO 63101

EXAMINER

HO, THOMAS Y

ART UNIT

PAPER NUMBER

3677

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/032,872

Applicant(s)

BOYD, DENNIS

Examiner

Thomas Y Ho

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 17 December 2002.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1,3-16 and 18-20 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,3-16,18-20 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.      6) Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 9, 11-12, 15-16, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd USPN5107557 in view of Saltness USPN3251075.

As to claim 1, Boyd discloses an inflatable mattress comprising:

- A first inflatable compartment 13 having a first layer, a second layer, and a periphery defining a length and width.
- A second inflatable compartment 23 having at least one additional layer (fig.13) and extending generally said length and width of said periphery.
- Said second inflatable compartment 23 being tufted (fig.13).
- A perimeter seal connecting said first inflatable compartment 13 to said second inflatable compartment 23.
- Wherein said perimeter seal is recessed from said periphery.
- Said second layer forms a boundary surface between said first inflatable compartment 13 and said second inflatable compartment 23.

Boyd fails to disclose or suggest:

- Said second layer contains a plurality of fluid communication channels between said first compartment and said second compartment.

Saltness discloses an inflatable bladder wherein a second layer 40 containing a plurality of fluid communication channels 41 forms a boundary between two inflatable compartments to prevent the side and end panels from blowing outwardly (col.2, ln.69-72) while still allowing for free passage of air between upper and lower sections of the bladder (col.3, ln.1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second layer disclosed by Boyd to have fluid communication channels, as taught by Saltness, to prevent the panels from blowing outwardly and allow for air passage between upper and lower compartments.

As to claim 3, Boyd discloses an inflatable mattress wherein:

- Said second inflatable compartment 23 further comprises a second additional layer between said one additional layer and said first inflatable compartment 13.
- Said second additional layer being sealed to said second layer of said first inflatable compartment 13 adjacent said second layer.

Boyd fails to disclose or suggest:

- Second layer contains a plurality of fluid communication channels.

Saltness discloses an inflatable bladder wherein a second layer 40 containing a plurality of fluid communication channels 41 forms a boundary between two inflatable compartments to prevent the side and end panels from blowing outwardly (col.2, ln.69-72) while still allowing for free passage of air between upper and lower sections of the bladder (col.3, ln.1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second layer disclosed by Boyd to have fluid communication channels, as taught by Saltness, to

prevent the panels from blowing outwardly and allow for air passage between upper and lower compartments.

As to claim 4, Boyd discloses an inflatable mattress wherein:

- Said second inflatable compartment 23 comprises a plurality of discontinuous seals.

As to claim 5, Boyd discloses an inflatable mattress wherein:

- Said second inflatable compartment 23 further comprises a plurality of attachments.

As to claim 9, Boyd discloses an inflatable mattress further comprising:

- A valve 21 in said first inflatable compartment 13.

As to claim 11, Boyd discloses an inflatable mattress comprising:

- A first inflatable compartment 13 having a first layer, a second layer, and sides with a length and width and defining a periphery.
- A second inflatable compartment 23 having at least one additional layer (fig.13) and extending generally the length and width of the periphery.
- Said second inflatable compartment 23 being tufted (fig.13).
- A perimeter seal connecting said first inflatable compartment 13 to said second inflatable compartment 23.
- Wherein said perimeter seal is spaced a distance from the periphery.

Boyd fails to disclose or suggest:

- A fluid communication channel between said first inflatable compartment and said second inflatable compartment.

Saltness discloses an inflatable bladder wherein a second layer 40 containing a plurality of fluid communication channels 41 forms a boundary between two inflatable compartments to

prevent the side and end panels from blowing outwardly (col.2, ln.69-72) while still allowing for free passage of air between upper and lower sections of the bladder (col.3, ln.1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second layer disclosed by Boyd to have fluid communication channels, as taught by Saltness, to prevent the panels from blowing outwardly and allow for air passage between upper and lower compartments.

As to claim 12, Boyd discloses an inflatable mattress wherein:

- Said second inflatable compartment 23 further comprises a plurality of discontinuous seals.

As to claim 15, Boyd discloses an inflatable mattress comprising:

- A first inflatable compartment 13 having a first layer, a second layer, and a periphery defining a length and a width.
- A second inflatable compartment 23 having at least one additional layer (fig.13) and extending generally said length and width of said periphery.
- Said second inflatable compartment 23 being tufted (fig.13).
- A layer of cushioning material in one of said first inflatable compartment 13 and said second inflatable compartment 23. The first inflatable compartment 13 contains water (col.2, ln.48-55).
- The other of said first inflatable compartment 13 and said second inflatable compartment 23 is inflated but does not contain a layer of cushioning material. The second inflatable compartment 23 contains air (col.2, ln.56-66).

- Said second layer forms a boundary surface between said first inflatable compartment 13 and said second inflatable compartment 23.

Boyd fails to disclose or suggest:

- Said second layer contains a plurality of fluid communication between said first compartment and said second compartment.

Saltness discloses an inflatable bladder wherein a second layer 40 containing a plurality of fluid communication channels 41 forms a boundary between two inflatable compartments to prevent the side and end panels from blowing outwardly (col.2, ln.69-72) while still allowing for free passage of air between upper and lower sections of the bladder (col.3, ln.1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second layer disclosed by Boyd to have fluid communication channels, as taught by Saltness, to prevent the panels from blowing outwardly and allow for air passage between upper and lower compartments.

As to claim 16, Boyd discloses an inflatable mattress wherein:

- Said layer of cushioning material is selected from the group consisting of foams, gels, and liquids. Water is the cushioning material disclosed by Boyd.

As to claim 18, Boyd discloses an inflatable mattress wherein:

- Said second inflatable compartment 23 further comprises a second additional layer between said one additional layer and said first inflatable compartment 13.
- Said second additional layer being sealed to said second layer of said first inflatable compartment 13 adjacent said second layer.

Boyd fails to disclose or suggest:

- Second layer contains a plurality of fluid communication channels.

Saltness discloses an inflatable bladder wherein a second layer 40 containing a plurality of fluid communication channels 41 forms a boundary between two inflatable compartments to prevent the side and end panels from blowing outwardly (col.2, ln.69-72) while still allowing for free passage of air between upper and lower sections of the bladder (col.3, ln.1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second layer disclosed by Boyd to have fluid communication channels, as taught by Saltness, to prevent the panels from blowing outwardly and allow for air passage between upper and lower compartments.

As to claim 19, Boyd discloses an inflatable mattress further comprising:

- A perimeter seal connecting said first inflatable compartment 13 to said second inflatable compartment 23.
- Wherein said perimeter seal is recessed from said periphery.

Claims 6-7 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd USPN5107557 in view of Saltness USPN3251075, and further in view of Mattson USPN4371997.

As to claim 6, Boyd fails to disclose or suggest:

- A layer of cushioning material within said second inflatable compartment.

Mattson discloses an inflatable cushion wherein a layer of cushioning material 10 is within a second inflatable compartment 11, because by using a cushioning material 10, the cushion will retain shape and level of comfort over an extended period of time (col.2, ln.15-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second inflatable compartment disclosed by Boyd to have a cushioning material therein, as taught by Mattson, so the cushion shape and comfort level is retained over a long period of time.

As to claim 7, Boyd fails to disclose or suggest:

- Said layer of cushioning material is selected from the group consisting of foams, gels, and liquids.

Mattson discloses the use of foam as cushioning material 10 (col.1, ln.39-40), so the cushion will retain shape and level of comfort over an extended period of time (col.2, ln.15-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second inflatable compartment disclosed by Boyd to have a cushioning material such as foam therein, as taught by Mattson, so the cushion shape and comfort level is retained over a long period of time.

As to claim 13, Boyd fails to disclose or suggest:

- A layer of cushioning material within said second inflatable compartment.

Mattson discloses an inflatable cushion wherein a layer of cushioning material 10 is within a second inflatable compartment 11, because by using a cushioning material 10, the cushion will retain shape and level of comfort over an extended period of time (col.2, ln.15-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second inflatable compartment disclosed by Boyd to have a cushioning material therein, as taught by Mattson, so the cushion shape and comfort level is retained over a long period of time.

As to claim 14, Boyd fails to disclose or suggest:

- Said layer of cushioning material is selected from the group consisting of foams, gels, and liquids.

Mattson discloses the use of foam as cushioning material 10 (col.1, ln.39-40), so the cushion will retain shape and level of comfort over an extended period of time (col.2, ln.15-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second inflatable compartment disclosed by Boyd to have a cushioning material such as foam therein, as taught by Mattson, so the cushion shape and comfort level is retained over a long period of time.

Claims 8, 10, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd USPN5107557 in view of Saltness USPN3251075, and further in view of Lindsay USPN3644950.

As to claim 8, Boyd fails to disclose or suggest:

- A valve between said first inflatable compartment 13 and said second inflatable compartment 23.

Lindsay discloses an inflatable support system with a valve 4 between the first inflatable compartment 1 and the second inflatable compartment 5, because the valve allows the user to change firmness to meet the user's needs and desires (col.2, ln.56-69). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inflatable mattress disclosed by Boyd to have a valve between the compartments, as taught by Lindsay, to allow a user to change firmness.

As to claim 10, Boyd fails to disclose:

- A pump connected with said valve.

Lindsay discloses an inflatable support system wherein a pump or air compressor 3 is connected with a valve leading to the first inflatable compartment 1, to inflate/deflate the unit to desired firmness (col.2, ln.55-69). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first inflatable compartment valve disclosed by Boyd to have a pump attached, as taught by Lindsay, to provide pressurized air to adjust firmness.

As to claim 20, Boyd fails to disclose or suggest:

- A valve between said first inflatable compartment and said second inflatable compartment.
- A pump in fluid communication with said valve.

Lindsay discloses an inflatable support system with a valve 4 between the first inflatable compartment 1 and the second inflatable compartment 5 with a pump 3 in fluid communication with valve 4, because the valve allows the user to change firmness to meet the user's needs and desires (col.2, ln.56-69). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inflatable mattress disclosed by Boyd to have a valve between the compartments, as taught by Lindsay, to allow a user to change firmness.

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd USPN5107557 in view of Saltness USPN3251075, and further in view of Mattson USPN4371997.

***Response to Arguments***

Applicant's arguments filed 12/17/02 have been fully considered but they are not persuasive.

Applicant argues (pg.4-5) in reference to the combination of Boyd in view of Saltness used in the rejection under 35 USC 103(a) that "such a modification would destroy the intent and purpose of the invention of Boyd. Specifically, the inclusion of a fluid communication channel between the air cushion and the water bladder would negate the benefits identified above. The suggest modification would allow water to flow from the water bladder into the air cushion where the water would cause a user to suffer heat loss by conduction to the water. The suggested modification would also defeat the purpose of easily adjusting the firmness and comfort of the mattress." The Examiner directs the Applicant to Figure 7 of the assembly disclosed by Boyd. It is clearly shown that water can flow into the inflatable chamber 23. Furthermore, Boyd also discloses "In Fig.7, one of the zones, labeled 49 is at least partially filled with water. It should be appreciated that these difference in inflation result in dramatic differences in the feel of mattress 11 from zone to zone" (col.3, ln.41-47). Because the addition of water in the inflatable chamber is desirable, as disclosed by Boyd, the combination of Boyd and Saltness does not destroy the intended function of Boyd. Therefore, the rejection under 35 USC 103(a) of Boyd in combination with Saltness stands.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Y. Ho whose email address is thomas.ho@uspto.gov and telephone number is (703) 305-4556. The examiner can normally be reached on M-F 9:30AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (703) 306-4115. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9327.

TYH  
February 13, 2003

  
ROBERT J. SANDY  
PRIMARY EXAMINER